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(54) SURFACE TREATING IMPLEMENT

VORRICHTUNG ZUR OBERFLÄCHENBEHANDLUNG

OUTIL DE TRAITEMENT DE SURFACE

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(73) Proprietor: **Bissell Homecare, Inc.
Grand Rapids, MI 49544 (US)**

(72) Inventors:
• **PERRY, Joseph, P.
Grand Rapids, Michigan 49503 (US)**
• **VANDERBILT, Herbert, J.
Lowell, Michigan 49331 (US)**
• **HALEY, Kevin
Byron Center, Michigan 49315 (US)**
• **MAHAFFY, Donald, J.
Zeeland, Michigan 49464 (US)**

- **BENACQUISTO, Justin
Caledonia, Michigan 49316 (US)**
- **CAIN, Kelli, A.
East Grand Rapids, Michigan 49506 (US)**
- **LENKIEWICZ, Kenneth, M.
Grand Rapids, Michigan 49505 (US)**
- **KRZEMINSKI, James, A.
Grand Rapids, Michigan 49506 (US)**

(74) Representative: **Schaumburg, Thoenes, Thurn,
Landskron, Eckert
Patentanwälte
Postfach 86 07 48
81634 München (DE)**

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Description

Field of the Invention

[0001] This invention relates to a floor cleaning implement. In one of its aspects, the invention relates to a stick-type small area surface cleaning implement utilizing replaceable fluid container that is adapted to discharge fluid onto a surface to be cleaned.

Description of the Related Art

[0002] U.S. Patent No. 3,679,319 to Munchel et al. discloses a stick-type cleaning implement for small areas of carpeted floor that includes a housing that mounts an aerosol cleaning solution dispenser in inverted relationship to a brush or other surface cleaning implement and has an actuation mechanism that opens the aerosol valve directly to the carpet when the housing is pressed into the surface to be cleaned.

[0003] US20050158116 to Belansky et al. discloses a cleaning apparatus having a body graspable by a user, a cleaning head at a distal end of the body, an aerosol canister with cleaning material mounted in the body, an interlocking device mounted on the canister to prevent inadvertent dispensing of the cleaning solution from the canister, and a lock-out feature that includes sloping walls and including a nipple, mounted within the body. The cleaning material is dispensed when a force is applied to the canister through the cleaning head

[0004] US6663307 Kopanic et al. discloses a cleaning device comprising a housing configured to retain a spray canister, a segmented shaft assembly connected to the housing, and a handle assembly connected to the shaft assembly. The housing includes an aligning protrusion matingly received by a recess in the over cap on the canister. The handle assembly can include a trigger linked to a pivot link to spray the contents of the canister. Also disclosed are a variety of attachments positioned in front of the sprayer nozzle, including a translucent spraying attachment, a curved applicator attachment, and a rake attachment.

[0005] WO2007028970 to Brown discloses a device comprising a pressurized container having a nozzle with a sleeve of a containment skirt mounted thereto. The skirt is pressed against a surface to be cleaned by a user causing the nozzle to move towards to pressurized container and release a jet of cleaning composition from the container. The skirt can have an absorbent pad removably attached thereto.

[0006] US6789705 to Drew discloses an apparatus for operating an aerosol dispenser from a distance. An elongated body receives the aerosol dispenser and mounts an extension pole and an actuation member. The extension pole mount is coaxially aligned with an aerosol dispenser-receiving cavity in the elongated body. The actuation member is movable between an at-rest position and a displaced position for spraying the contents of the aer-

osol dispenser.

[0007] US6866165 to Heathcock et al. discloses a trigger-actuated cleaning tool that moves an aerosol canister axially to expel the contents of the canister.

5 [0008] US6663306 to Pollicicchio et al. discloses a cleaning implement having a mop head attached to a handle and a liquid delivery system having a container filled with cleaning solution removably attached to a fitment. A disposable cleaning pad having an absorbent layer and an attachment layer is also disclosed.

10 [0009] US6000088 to Wright et al. discloses a suction cleaning device, wherein a user can push downward on the handle to spray water from a bottle of cleaning solution.

15 [0010] US20060276730 to Thiebaut et al. discloses a massaging device using an aerosol container and having a spray manifold to a textured surface, the spraying being actuated by axially displacing a spray valve relative to a housing of the device by applying force.

20 EP-A-1 169 962 discloses an applicator device for floor products comprising a cleaning head having a cover which supports a product delivery valve and a sponge, a container for product which fits into the cover, and a handle which moves the cleaning head across a surface to be cleaned. The cover has a cylindrical shape which is received inside a corresponding protrusion of the container to couple the cover to the container. The valve consists of a pin extending through the cylindrical shape and into the sponge, and a head on the pin that normally blocks the passage of cleaning product between the container and sponge. However, when the applicator device is pressed against the floor, the valve opens by the pin moving inwards, thereby displacing the head and allowing the cleaning product to flow from the container to the sponge.

SUMMARY OF THE INVENTION

40 [0011] A surface treating implement according to the invention is defined by the subject matter of claim 1.

[0012] In another embodiment, the surface treating implement further comprises a plurality of rake members formed on the nozzle assembly.

45 [0013] In another embodiment, at least one of the plurality of rake members comprises a ramped surface.

[0014] In another embodiment, the container receiver comprises a unique geometry that is complementary to a mating unique geometry on the container.

50 [0015] In another embodiment, the rake members are adapted to penetrate carpet fibers on the surface to be treated and at least one fluid distribution conduit is adapted to distribute the treating composition near a base of the carpet fibers.

55 [0016] In another embodiment, the surface treating implement further comprises a brush assembly adapted to agitate the surface to be treated after the treating composition has been applied to the surface to be treated.

[0017] In another embodiment, the brush assembly is

mounted to the nozzle assembly.

[0018] In another embodiment the surface treating implement further comprises a squeegee assembly affixed to the body.

[0019] In another embodiment, the at least one container is an aerosol container adapted to dispense fluid under pressure.

[0020] In another embodiment, the at least one container is a liquid container adapted to dispense fluid by gravity feeding.

[0021] In another embodiment, the at least one container comprises at least one aerosol container and at least one liquid container.

[0022] In another embodiment, the nozzle assembly is rotatably mounted to the container receiver for movement between a fluid retention position and a fluid discharge position.

[0023] In another embodiment, the container is an aerosol container having a valve stem and the nozzle assembly has an actuator that interfaces with the valve stem to displace the valve stem with respect to the container receiver to discharge the treating composition from the aerosol container as the nozzle assembly moves between the fluid retention position and the fluid discharge position.

[0024] In another embodiment, the container has a valved opening and the nozzle assembly has an actuator that interfaces with a valve in the valved opening to displace the valve with respect to the container receiver to discharge the treating composition from the container as the nozzle assembly moves between the fluid retention position and the fluid discharge position.

[0025] The treating composition can be any one of a variety of surface treating compositions for carpet or fabric surfaces or for bare floor surfaces. For example, the treating composition comprises a cleaning solution. Alternatively, the treating composition comprises a topical treatment. The topical treatment can be an anti-stain, anti-soil, miticide, or peroxide composition.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] In the drawings:

[0027] FIG. 1 is a perspective view of a stick cleaning implement according to the present invention.

[0028] FIG. 2 is an exploded view of the stick cleaning implement of FIG. 1, showing a handle, a container, and a body at a lower portion thereof.

[0029] FIG. 3 is top view of an upper housing of the body of FIG. 2.

[0030] FIG. 4 is a bottom view of the upper housing of FIG. 3.

[0031] FIG. 5 is an exploded view of a nozzle assembly of the body of FIG. 2.

[0032] FIG. 6 is a sectional view taken through line 6-6 of FIG. 5.

[0033] FIG. 7 is an exploded perspective view of a brush assembly of the body of FIG. 2.

[0034] FIG. 8 is a partial sectional view taken through line 8-8 of FIG. 1, showing the dispenser in the off position.

[0035] FIG. 9 is a partial sectional like FIG. 8 but showing the dispenser in the on position.

[0036] FIG. 10 is a sectional view taken through line 10-10 of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0037] Referring to the drawings, and in particular to FIGS. 1 and 2, a small area carpet treating implement 10 in the form of a stick cleaner comprises a handle assembly 12, a body assembly 14 and a container 16 removably attached to the body assembly 14. The handle assembly 12 further comprises a plurality of handle segments 18 that are removably coupled via segment connectors 20 which are commonly used in the stick floor cleaning industry. A grip 22 provides a user interface at a first end of the handle assembly 12 while a second end is removably coupled to the body assembly 14.

[0038] Referring to FIGS. 3 and 4, the body assembly 14 further comprises an upper housing 24, a nozzle assembly 26, and a brush assembly 28. The upper housing 24 further comprises an exterior surface 30 and an interior surface 32. A handle receiver 34 is integrally formed on a rear surface of the upper housing 24 and removably receives the second end of the handle assembly 14. A container receiver 36 is integrally formed on an upper surface of the upper housing 24 and removably receives the container 16. In one embodiment the container receiver 36 comprises a unique geometry that corresponds with a mating fitting on the container 16 so that standard containers are not compatible with the container receiver 36. In one embodiment, the unique geometry on the container 16 is formed by removing the finger pad portion of the unique spray-through cap to expose a valve stem 102, pedestal, and mounting cup on the container 16. The container receiver 36 design corresponds to the unique spray-through cap thus creating a unique geometry whereby only the unique spray-through cap will mate with the container receiver 36. A container aperture 38 is formed through the upper housing 24 and is generally aligned with a longitudinal axis of the cleaner container 16. A pair of locking lever notches 40 is formed asymmetrically around a perimeter of the aperture 38. A plurality of stiffening ribs 42 are arranged about the perimeter of the container receiver 36 to provide strength to the receiver wall and support the container 16 as is commonly known in the art. A plurality of screw bosses 44 provides a mechanism to secure the upper housing 24 to the nozzle assembly 24 via screws or other commonly known fastening devices and techniques. The interior surface 32 of the upper housing 24 further comprises a pair of pivot arms 46, each of which incorporates a single pivot pin 48 that are axially aligned with each other between the pivot arms 46.

[0039] Referring to FIG. 5, the nozzle assembly 26 fur-

ther comprises a nozzle housing 50, a manifold cover, 52, and an angle conduit 54. The nozzle housing further comprises a pair of support arms 56 that have through openings 58 at an upper portion thereof that receive the pivot pins 48 on the pivot arms 46 in the upper housing 24 to pivotally mount the nozzle housing 50 to the upper housing 24. A plurality of rake blades 60 are formed along a bottom and rear surface of the nozzle housing 50, each further comprising a fluid distribution conduit 62 formed therein. In one embodiment each rake blade 60 is ramped, i.e., a rearward portion of the rake blade is wider than a forward portion of the rake blade. Each of the fluid distribution conduits 62 are in fluid communication via a distribution channel 64 formed across the width of the nozzle housing 50. The manifold cover 52 further includes a manifold conduit 66 projecting upwardly therefrom and in fluid communication with the distribution channel 64. A manifold seal 53 is positioned between the manifold cover and the nozzle housing 50 to prevent leaking of fluid as it passes through the distribution channel 64. The manifold cover 52 is securely attached to the nozzle housing 50 via commonly known methods of heat staking, ultrasonic welding, adhesives, or screws.

[0040] Referring to FIGS. 5 and 6, the angle conduit 54 further comprises a base portion 68 integrally formed with a main body 70 and forming a fluid conduit 72 there-through. The base portion 68 is fixedly mounted to the manifold cover 52 and surrounds the manifold conduit 66. A fluid inlet 74 is formed at the other end of the fluid conduit 72 and further comprises a cup seal retainer recess 76 that receives a seal 77 and a seal retainer 78. The main body 70 further comprises an annular flange 80 concentric with an upper portion of the fluid conduit 72. A pair of opposed locking ears 82 are positioned in spaced relation to the annular flange 80 and interface with a lock lever 84 that rotates about an outer surface of the main body 70 between the annular flange 80 and the locking ears 82. The lock lever 84 is a rigid elongate structure comprising a grip 86 on one end and an aperture 88 on an opposing end. The aperture 88 comprises a pair of opposed notches 90 that correspond with the locking ears 82 of the main body 70.

[0041] In an alternate configuration the seal 77, seal retainer 78, and angle conduit 54 can be replaced by an aerosol actuator and a flexible tube. The aerosol actuator comprises an L-shaped internal fluid conduit that is sealingly connected to the cleaner container valve stem 102 on an inlet side and to the flexible tube on an outlet side. The flexible tube is fluidly connected to the manifold conduit 66 formed on the manifold cover 52. The manifold cover 52 can further comprise an upwardly ramped protrusion formed at the center portion thereof.

[0042] Referring to FIG. 7, the brush assembly 28 further comprises a brush body 92 and a plurality of bristles 94. The brush body 92 incorporates a plurality of mounting bosses 96 for mechanical attachment to the upper housing 24 by a corresponding number of screws 97. A decorative bezel 98 surrounds the bristles 94 and snaps

into place on the brush body 92 in a conventional manner. A squeegee 100 can be located on the brush body 92 or the bezel 98 for use on bare floor surfaces.

[0043] The container 16 is a conventional aerosol dispenser utilizing contents under pressure that are dispensed by engaging a commonly known valve assembly that includes a valve stem 102. Alternatively, the container 16 can be any type of container that dispenses a treating composition to the surface to be treated. For example, the container 16 can be a liquid container that feeds via gravity through a spring loaded normally closed valve or an optional commonly known pump assembly such as a trigger or battery powered motor coupled to a known pump. Furthermore, it is also contemplated that the invention can comprise more than one container 16 with each container storing a different treating composition. The treating composition(s) can include any fluid, solid, or gas that can be used to clean or otherwise treat the surface to be treated. By way of example, one container can store a standard carpet cleaning solution, and a second container can store a topical treatment, such as an anti-stain, anti-soil, miticide, or peroxide composition, or other commonly known carpet treatments. It is further anticipated that the invention can comprise a hybrid whereby one of the containers 16 is an aerosol container and a second container is a liquid container.

[0044] Referring to the figures and particularly to FIGS. 7, 8 and 9, the treating implement 10 is readied for use the lock lever grip 86 is moved to the left as the user is facing the nozzle assembly 26 and placed in a "lock" position. With the lock lever 84 in the "lock" position, the locking lever notches 90 are offset from the locking ears 82 on the angle conduit 54 and thus prevent the angle conduit 54 from moving. A full container 16 is inverted and placed in the container receiver 36 formed in the upper housing 24 so that the valve stem 102 slides within the cup seal retainer 78 and the sides of the container 16 are aligned with the container receiver 36 of the upper housing 24. To dispense the treating composition from the container 16, the lock lever is moved to the right and placed in an "unlock" position. With the lock lever 84 in the "unlock" position, the locking lever notches 90 are aligned with the locking ears 82 on the angle conduit 54.

[0045] Referring to FIGS. 9 and 10, to use the treating implement 10, the user grasps the handle 12 at a convenient location with the body 14 oriented in a downward position. The user places the nozzle assembly 26 on the surface to be treated and pushes down on the handle 12. The downward force causes the nozzle assembly 26 to rotate about the pivot pins 48 associated with the upper housing 24 which, in turn, moves the manifold cover 52 and angle conduit 54 in a generally upward direction so that the valve stem 102 of the container 16 is forced upward. Upward movement of the valve stem 102 releases the treating composition from the container 16 to flow, as shown by arrows, through the cup seal retainer 78, through the fluid conduit 72, through the manifold conduit 66 and into the distribution channel 64 within the nozzle

housing 50. Now referring to FIG. 9, the fluid is distributed across the distribution channel 64 as shown by arrows and through the individual distribution conduits 62 formed in each of the rake blades 60. On carpeted surfaces, the rake blades penetrate the carpet nap and extend near the carpet backing thus separating the carpet fibers so that the treating composition can flow deep down into the carpet fibers. The treating composition can be further worked into the carpet by repeated downward stroking with either the rake blades 60 or brush bristles 94. In one embodiment, the treating composition is a heavy traffic formulation that can be dried on the surface to be treated and can be subsequently removed via conventional vacuum cleaning.

[0046] Other embodiments of the treating implement not specifically shown herein are possible. For example, the treating implement can be adapted for use on bare floors by use of the optional squeegee 100. Furthermore, the rake blades 60 can be combined with additional bristles 94 for an alternate agitation device.

Claims

1. A surface treating implement (10), comprising:
 - a body (14) comprising;
 - a container receiver (36) an upper housing (24) having integrally formed there on; and
 - a nozzle assembly (26) comprising a fluid conduit (72) fluidly connected to the container receiver (36);
 - at least one container (16) selectively mounted to the container receiver (36) and containing a predetermined amount of a treating composition and having a dispensing opening in fluid communication with the fluid conduit (72);
 - a handle (12) associated with the body (14); and
 - wherein the nozzle assembly (26) is pivotally mounted to the upper housing (24) for selective displacement with respect thereto of a predetermined distance to release the treating composition from the container (16) through the fluid conduit (72) and onto a surface to be treated.
2. The surface treating implement (10) according to claim 1, and further comprising a plurality of rake members (60) formed on the nozzle assembly (26).
3. The surface treating implement (10) according to claim 2, wherein at least one of the plurality of rake members (60) comprises a ramped surface.
4. The surface treating implement (10) according to claim 1, and wherein the container receiver (36) comprises a unique geometry that is complementary to a mating unique geometry on the container (16).
5. The surface treating implement (10) according to claim 2, wherein the rake members (60) are adapted to penetrate carpet fibers on the surface to be treated and at least one fluid distribution conduit (62) is adapted to distribute the treating composition near a base of the carpet fibers.
6. The surface treating implement (10) according to claim 1, and further comprising a brush assembly (28) adapted to agitate the surface to be treated after the treating composition has been applied to the surface to be treated.
7. The surface treating implement (10) according to claim 6, wherein the brush assembly (28) is mounted to the nozzle assembly (26).
8. The surface treating implement (10) according to claim 1, and further comprising a squeegee assembly (100) affixed to the body (14).
9. The surface treating implement (10) according to claim 1, wherein the at least one container (16) is an aerosol container adapted to dispense fluid under pressure.
10. The surface treating implement (10) according to claim 9, wherein the aerosol container has a valve stem (102) and the nozzle assembly (26) has an actuator that interfaces with the valve stem to displace the valve stem (102) with respect to the container receiver (36) to discharge the treating composition from the aerosol container as the nozzle assembly moves between the fluid retention position and the fluid discharge position.
11. The surface treating implement (10) according to claim 1, wherein the at least one container (16) is a liquid container adapted to dispense fluid by gravity or is a pressurized container.
12. The surface treating implement (10) according to claim 1, wherein the nozzle assembly (26) is pivotally mounted to the upper housing (24) for movement between a fluid discharge position and a fluid retention position.
13. The surface treating implement (10) according to claim 1, wherein the at least one container (16) has a valved opening and the nozzle assembly (26) has an actuator that interfaces with a valve in the valved opening to displace the valve with respect to the container receiver (36) to discharge the treating composition from the at least one container (16) as the nozzle assembly moves between the fluid retention position and the fluid discharge position.

14. The surface treating implement (10) according to any of claims 1-13, wherein the treating composition comprises at least one of a cleaning solution and a topical treatment.
15. The surface treating implement (10) according claim 15, wherein the treating composition comprises a topical treatment, and the topical treatment comprises an anti-stain, anti-soil, miticide, or peroxide composition.

Patentansprüche

1. Vorrichtung (10) zur Oberflächenbehandlung, umfassend:
- einen Körper (14) mit einem oberen Gehäuse (24), das eine Behälteraufnahme (36), die einstückig darauf ausgebildet ist, aufweist; und eine Düsenanordnung (26), die eine Fluidleitung (72) in Fluidverbindung mit der Behälteraufnahme (36) umfasst, mindestens einen Behälter (16), der selektiv an der Behälteraufnahme (36) montiert ist und eine vorgegebene Menge eines Behandlungsgemisches enthält sowie eine Abgabeöffnung in Fluidverbindung mit der Fluidleitung (72) aufweist, einen mit dem Körper (14) verbundenen Griff (12), und bei der die Düsenanordnung (26) schwenkbar am oberen Gehäuse (24) montiert ist zur selektiven Verlagerung in Bezug auf dieses um einen vorgegebenen Abstand zur Freigabe des Behandlungsgemisches aus dem Behälter (16) durch die Fluidleitung (72) und auf die zu behandelnde Oberfläche.
2. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1 und des Weiteren umfassend eine Vielzahl von rechenförmigen Elementen (60), die auf der Düsenanordnung (26) ausgebildet sind.
3. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 2, bei der mindestens eines der Vielzahl der Rechenelemente (60) eine rampenförmige Oberfläche besitzt.
4. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1, bei der die Behälteraufnahme (36) eine eindeutige Geometrie aufweist, die komplementär zu einer passenden eindeutigen Geometrie auf dem Behälter (16) ist.
5. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 2, bei der die rechenförmigen Elemente

(60) dazu geeignet sind, Teppichfasern auf der zu behandelnden Oberfläche zu durchdringen und mindestens eine Flüssigkeitsverteilungsleitung (62) dazu geeignet ist, das Reinigungsgemisch nahe einer Basis der Teppichfasern zu verteilen.

6. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1 und des Weiteren umfassend eine Bürstenanordnung (28), die dazu geeignet ist, die zu behandelnde Oberfläche hin- und her zu bewegen, nachdem das Reinigungsgemisch auf die zu behandelnde Oberfläche aufgebracht worden ist.
7. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 6, bei der die Bürstenanordnung (28) an der Düsenanordnung (26) montiert ist.
8. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1 und des Weiteren umfassend eine am Körper (14) angebrachte Schrappanordnung (100).
9. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1, bei der der mindestens eine Behälter (16) ein Aerosol-Behälter ist, der dazu geeignet ist, ein Fluid unter Druck abzugeben.
10. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 9, bei der der Aerosolbehälter eine Ventilstange (102) und die Düsenanordnung (26) ein Stellglied umfasst, das mit der Ventilstange gekoppelt ist, um die Ventilstange (102) in Bezug auf die Behälteraufnahme (36) zu verlagern, um das Reinigungsgemisch aus dem Aerosolbehälter zu entleeren, wenn sich die Düsenanordnung zwischen der Fluidrückhalteposition und der Fluidaustrittsposition bewegt.
11. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1, bei der der mindestens eine Behälter (16) ein Flüssigkeitsbehälter, der dazu geeignet ist, ein Fluid durch Schwerkraft zu verteilen, oder der ein Druckbehälter ist.
12. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1, bei der die Düsenanordnung (26) schwenkbar am oberen Gehäuse (24) montiert ist für eine Bewegung zwischen einer Fluidaustrittsposition und einer Fluidrückhalteposition.
13. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 1, bei der der mindestens eine Behälter (16) eine Öffnung mit einem Ventil aufweist und die Düsenanordnung (26) ein Stellglied hat, das mit einem Ventil in der Öffnung mit Ventil gekoppelt ist, um das Ventil in Bezug auf die Behälteraufnahme (36) zu verlagern, um das Behandlungsgemisch aus dem mindestens einen Behälter (16) zu entleeren, wenn sich die Düsenanordnung zwischen der Fluid-

drückhalteposition und der Fluidaustrittsposition bewegt.

14. Vorrichtung (10) zur Oberflächenbehandlung nach einem der Ansprüche 1 bis 13, bei der das Behandlungsgemisch mindestens eine Reinigungslösung und/oder eine Aufbereitung zur sachgemäßen Behandlung umfasst.

15. Vorrichtung (10) zur Oberflächenbehandlung nach Anspruch 15, bei der das Reinigungsgemisch eine Aufbereitung zur sachgemäßen Behandlung und die Aufbereitung zur sachgemäßen Behandlung ein Anti-Fleck-Gemisch, ein Anti-Schmutz-Gemisch, ein milbentötendes Mittel oder ein Peroxidgemisch umfasst.

Revendications

1. Outil de traitement de surface (10) qui comprend :

- un corps (14) comprenant :
- un boîtier supérieur (24) ayant
- un récepteur de récipient (36) formé en une seule pièce sur celui-ci ; et
- un ensemble buse (26) doté d'un conduit de fluide (72) fluidiquement connecté avec le récepteur de récipient (36) ;
- au moins un récipient (16) monté de manière sélective sur le récepteur de récipient (36), et contenant une quantité prédéterminée de composition de traitement et possédant une ouverture de distribution se trouvant en communication fluidique avec le conduit de fluide (72) ;
- une poignée (12) associée au corps (14) ; et

dans lequel l'ensemble buse (26) est monté à pivotement sur le boîtier supérieur (24) afin de se déplacer de manière sélective par rapport à celui-ci selon une distance prédéfinie et libérer la composition de traitement du récipient (16) par le conduit de fluide (72) sur une surface à traiter.

2. Outil de traitement de surface (10) selon la revendication 1, et comprenant en outre une pluralité d'éléments de râteau (60) formés sur l'ensemble buse (26).
3. Outil de traitement de surface (10) selon la revendication 2, dans lequel au moins l'un des éléments de la pluralité des éléments de râteau (60) comprend une surface inclinée.
4. Outil de traitement de surface (10) selon la revendication 1, et dans lequel le récepteur de récipient (36) comprend une géométrie unique qui est complémentaire d'une géométrie unique correspondante du

récipient (16).

5. Outil de traitement de surface (10) selon la revendication 2, dans lequel les éléments de râteau (60) sont conçus pour pénétrer dans les fibres de tapis sur la surface à traiter et au moins un conduit de distribution de fluide (62) est conçu pour distribuer la composition de traitement près de la base des fibres de tapis.

6. Outil de traitement de surface (10) selon la revendication 1 et comprenant en outre un ensemble brosse (28) conçu pour agiter la surface à traiter après que la composition de traitement a été appliquée sur la surface à traiter.

7. Outil de traitement de surface (10) selon la revendication 6, dans lequel l'ensemble brosse (28) est monté sur l'ensemble buse (26).

8. Outil de traitement de surface (10) selon la revendication 1, et comprenant en outre un ensemble raclette (100) fixé sur le corps (14).

9. Outil de traitement de surface (10) selon la revendication 1, dans lequel le au moins un récipient (16) est un récipient pour aérosol conçu pour distribuer le fluide sous pression.

10. Outil de traitement de surface (10) selon la revendication 9, dans lequel le récipient pour aérosol possède une tige de vanne (102) et l'ensemble buse (26) possède un actionneur qui établit une interface avec la tige de vanne pour déplacer la tige de vanne (102) par rapport au récepteur de récipient (36) afin de décharger la composition de traitement depuis le récipient d'aérosol alors que l'ensemble buse se déplace entre la position de rétention du fluide et la position de déchargement du fluide.

11. Outil de traitement de surface (10) selon la revendication 1, dans lequel le au moins un récipient (16) est un récipient pour liquide conçu pour distribuer le fluide par gravité ou est un récipient sous pression.

12. Outil de traitement de surface (10) selon la revendication 1, dans lequel l'ensemble buse (26) est monté à pivotement sur le boîtier supérieur (24) pour effectuer un déplacement entre une position de déchargement du fluide et une position de rétention du fluide.

13. Outil de traitement de surface (10) selon la revendication 1, dans lequel le au moins un récipient (16) possède une ouverture munie d'une vanne et l'ensemble buse (26) possède un actionneur qui établit une interface avec une vanne dans l'ouverture munie d'une vanne afin de déplacer la vanne par rapport

au récepteur de récipient (36) afin de décharger la composition de traitement depuis le au moins un récipient (16) alors que l'ensemble buse se déplace entre la position de rétention du fluide et la position de déchargement du fluide.

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- 14.** Outil de traitement de surface (10) selon l'une quelconque des revendications 1 à 13, dans lequel la composition de traitement comprend au moins l'un parmi une solution de nettoyage et un traitement topique.

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- 15.** Outil de traitement de surface (10) selon la revendication 15, dans lequel la composition de traitement comprend un traitement topique, et le traitement topique comprend une composition anti-coloration, anti-salissures, acaricide ou peroxyde.

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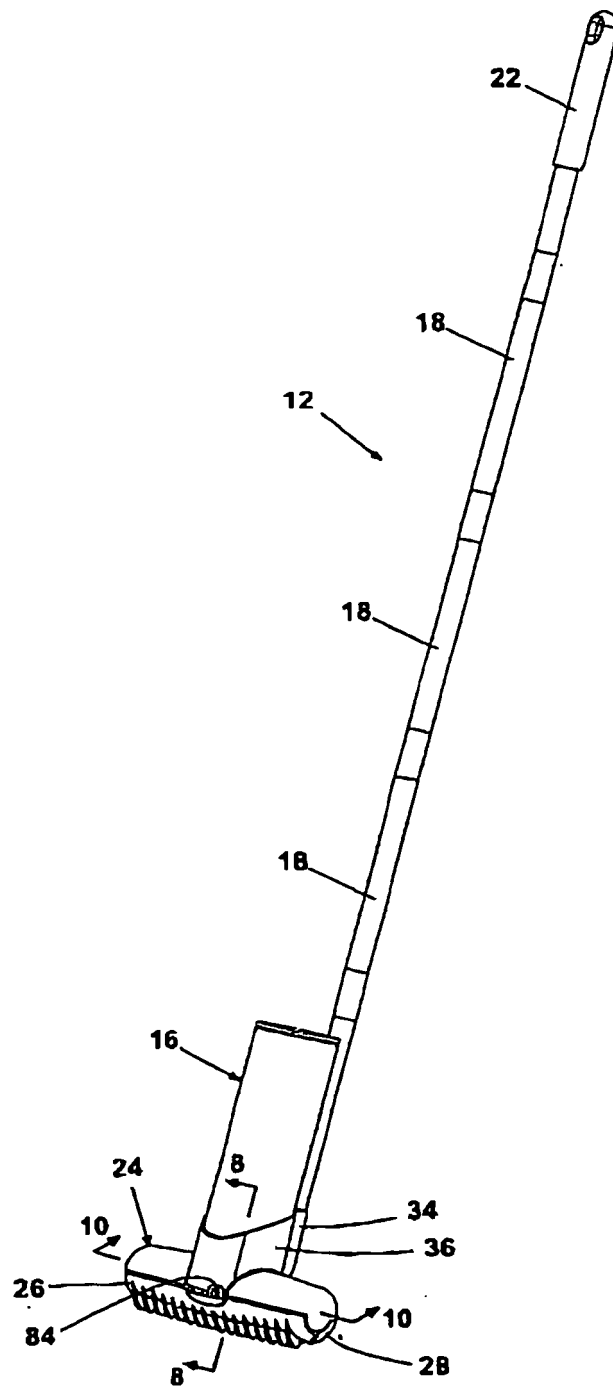
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Fig. 1



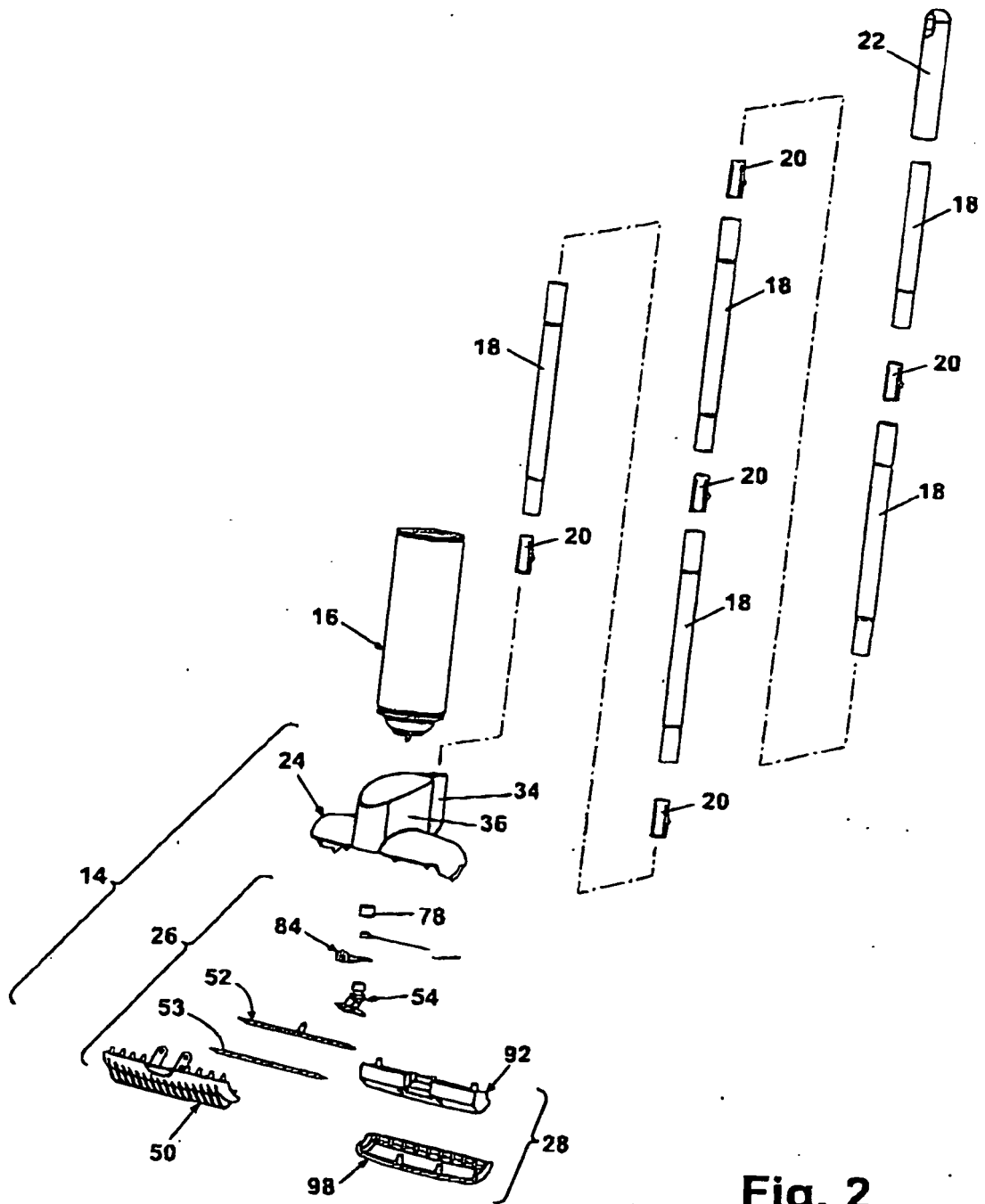


Fig. 2

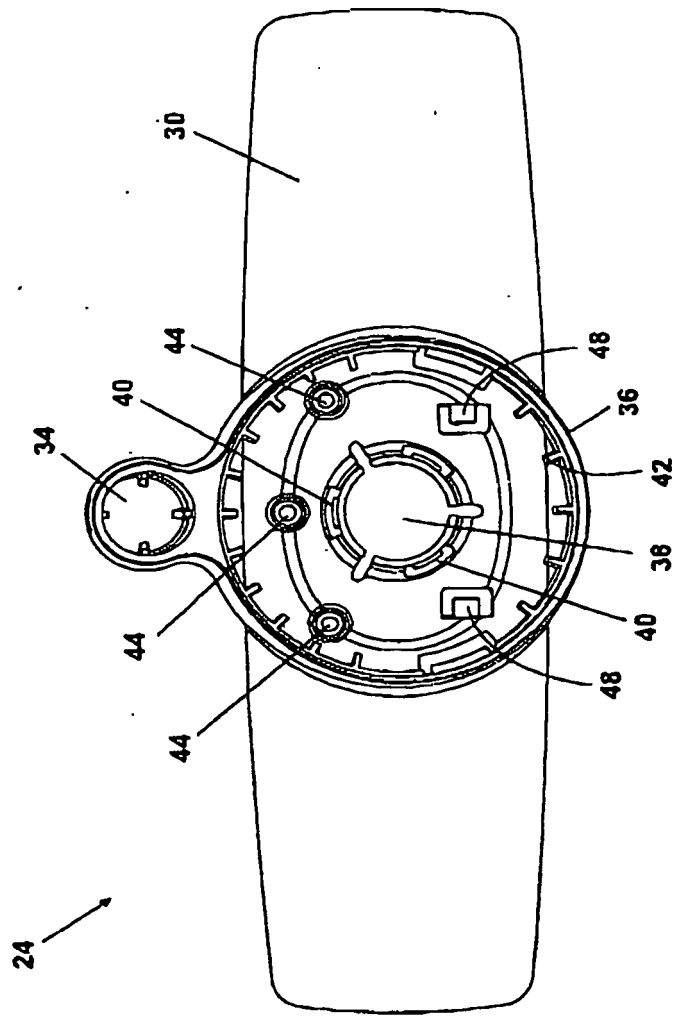


Fig. 3

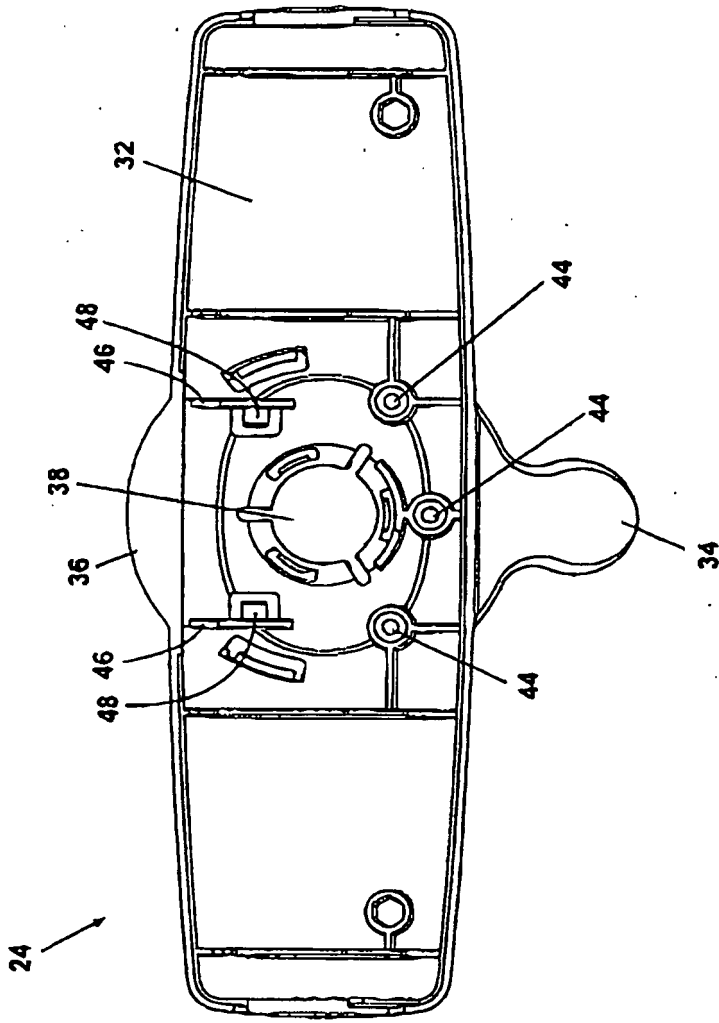


Fig. 4

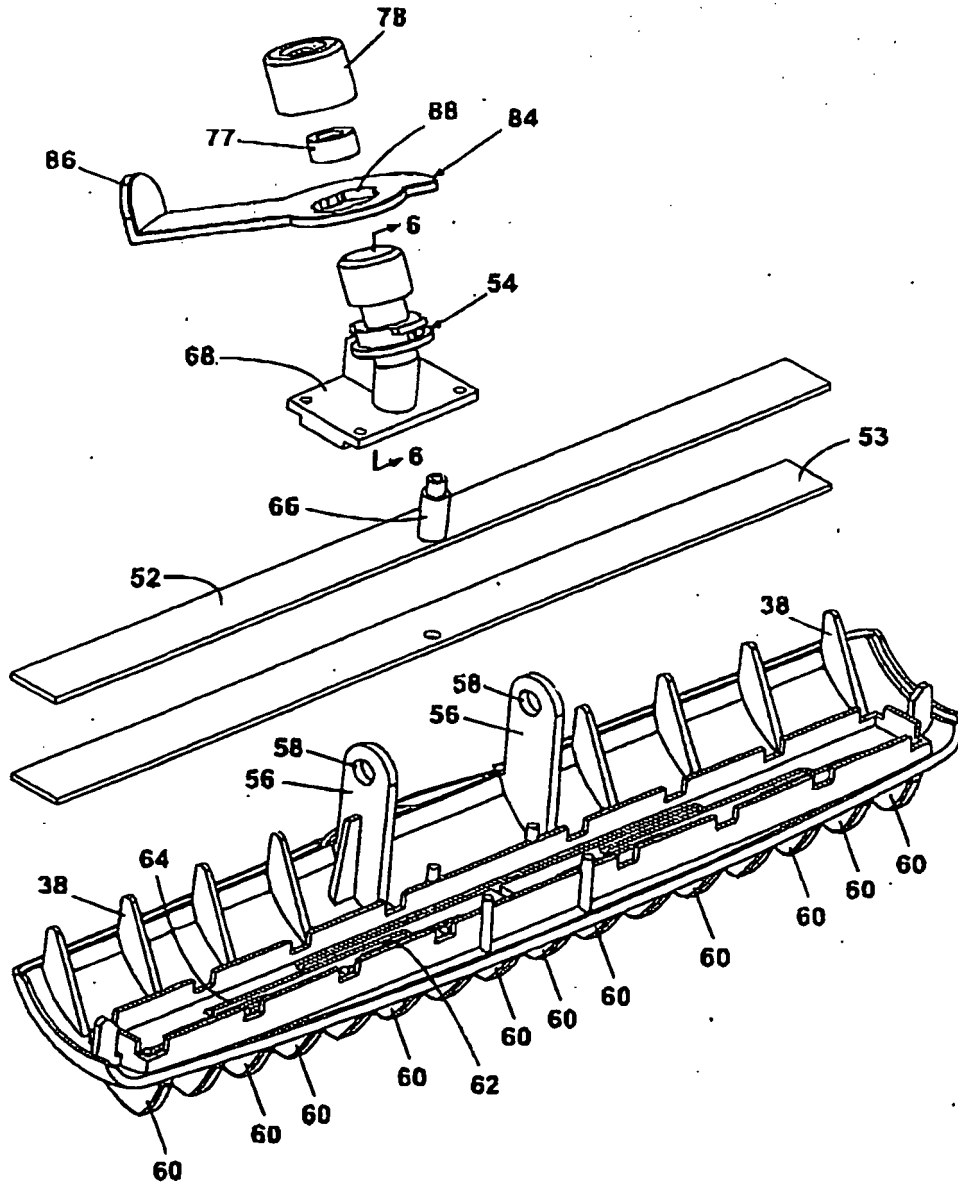


Fig. 5

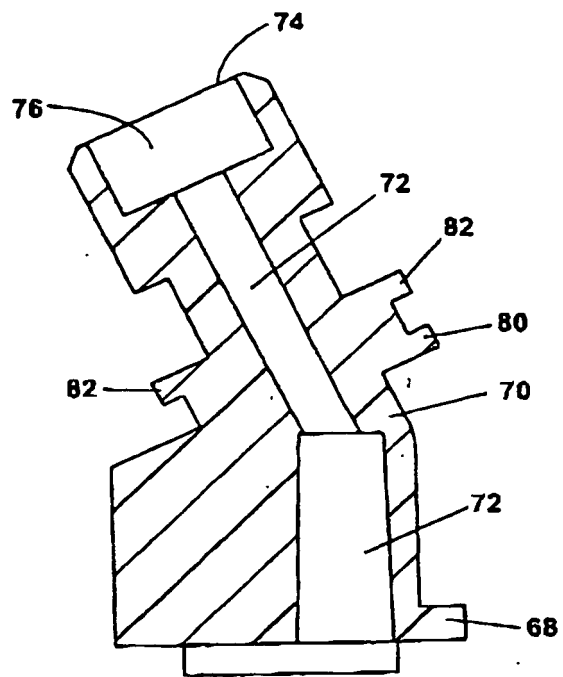


Fig. 6

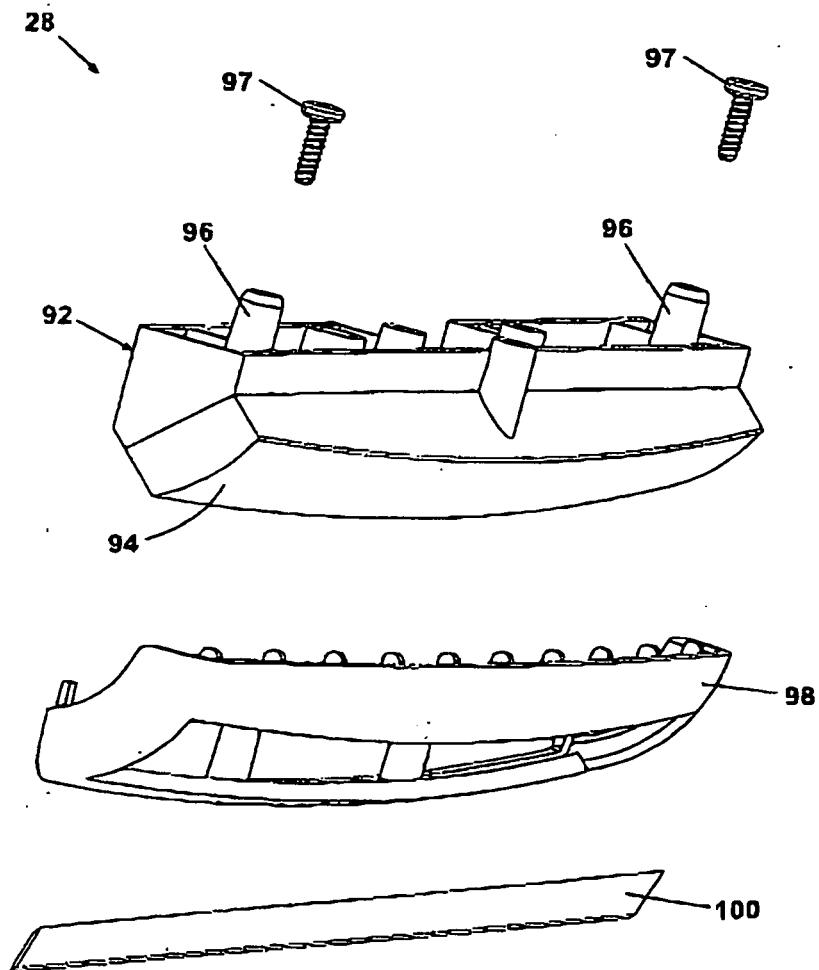


Fig. 7

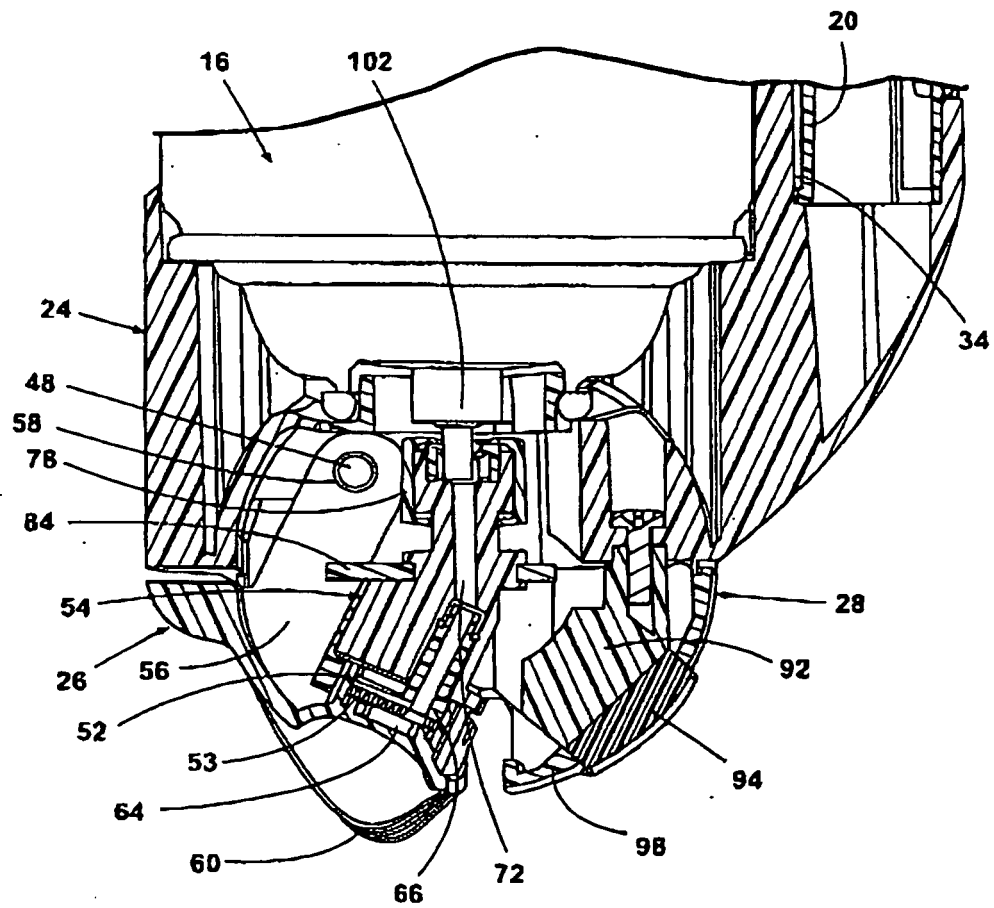


Fig. 8

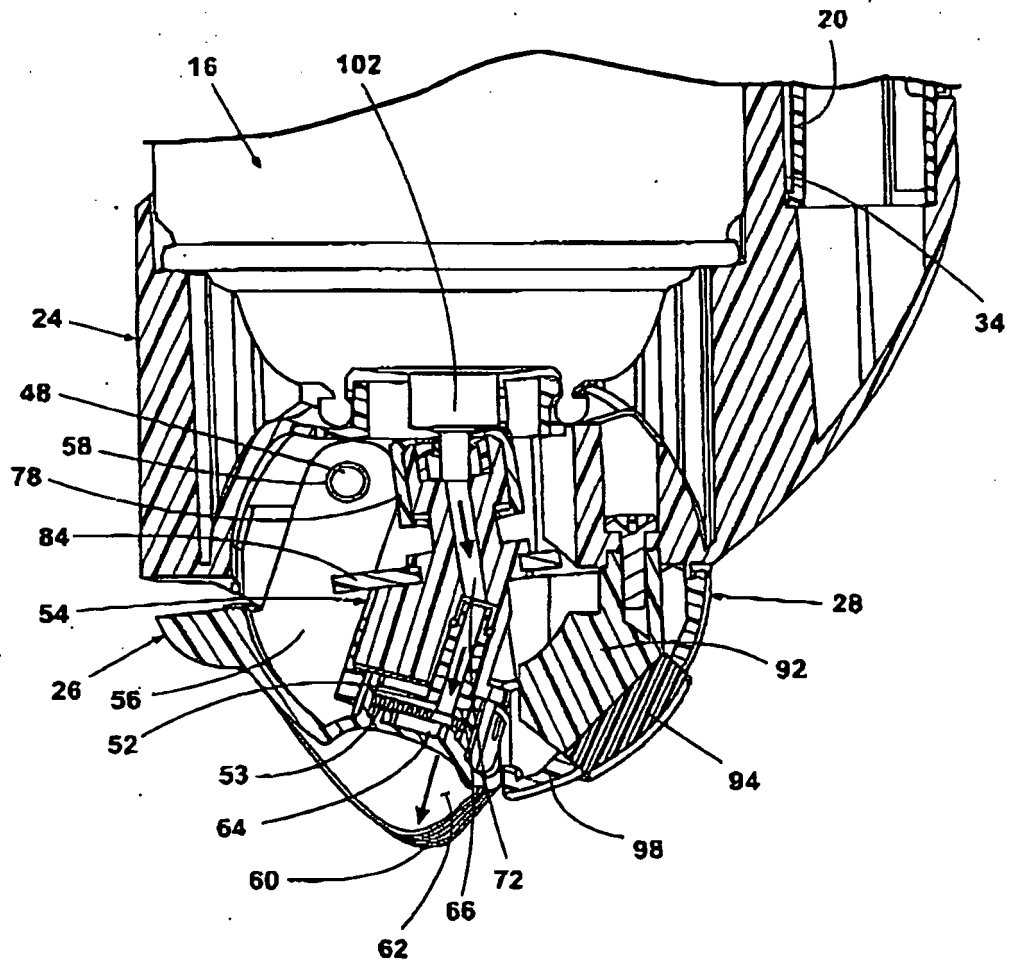


Fig. 9

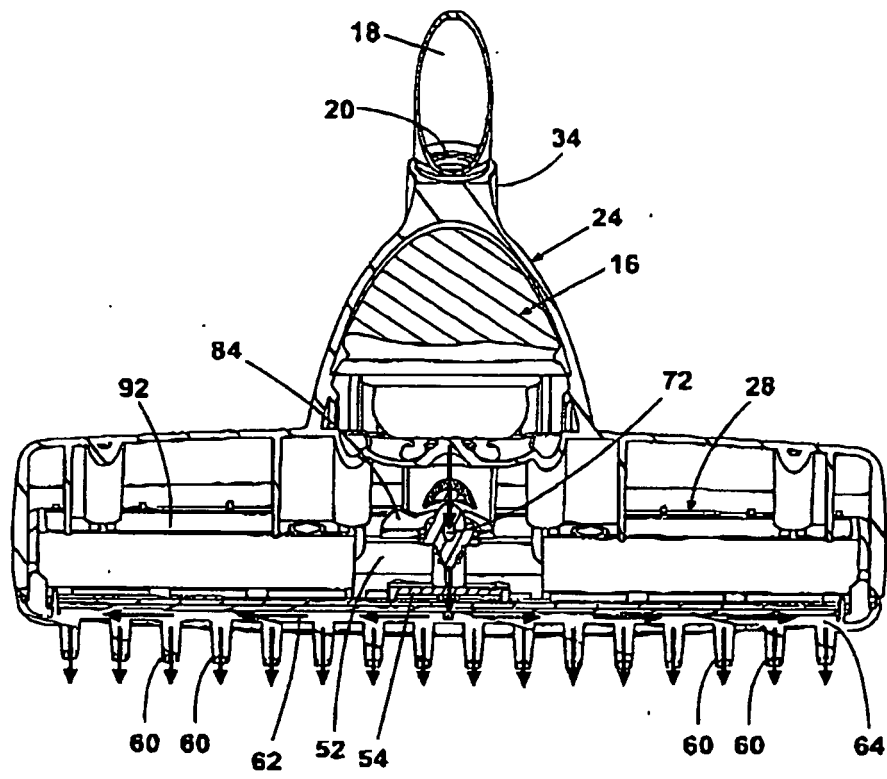


Fig. 10

REFERENCES CITED IN THE DESCRIPTION

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